

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/089907 A1

(51) International Patent Classification⁷: **B01D 53/22**,
69/14, 71/60 // 179:00

Sciences and Technology, Norwegian University of Science and Technology (NTNU), N-7491 Trondheim (NO).

(21) International Application Number:
PCT/NO2005/000098

(74) Agent: **LILLEGRAVEN, Rita**; Zacco Norway AS, P.O. Box 765 Sentrum, N-0106 Oslo (NO).

(22) International Filing Date: 18 March 2005 (18.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20041199 22 March 2004 (22.03.2004) NO
20041199 30 November 2004 (30.11.2004) NO

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (for all designated States except US): **NTNU TECHNOLOGY TRANSFER AS** [NO/NO]; Høgskoleringen 1, N-7491 Trondheim (NO).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

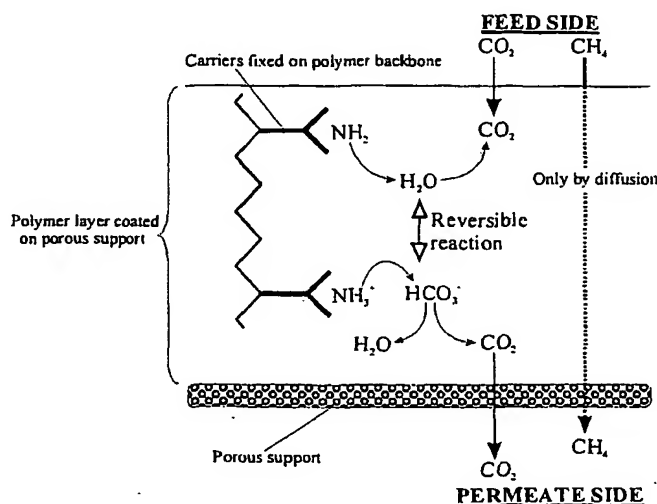
(75) Inventors/Applicants (for US only): **HÄGG, May-Britt** [NO/NO]; Department of Chemical Engineering, Faculty of Natural Sciences and Technology, Norwegian University of Science and Technology (NTNU), N-7491 Trondheim (NO). **KIM, Taek-Joong** [KR/NO]; Department of Chemical Engineering, Faculty of Natural Sciences and Technology, Norwegian University of Science and Technology (NTNU), N-7491 Trondheim (NO). **LI, Baoan** [CN/NO]; Department of Chemical Engineering, Faculty of Natural

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MEMBRANE FOR SEPARATING CO₂ AND PROCESS FOR THE PRODUCTION THEREOF



(57) Abstract: A fixed-site-membrane comprising a support structure coated with crosslinked polyvinylamine, wherein the crosslinking agent is a compound comprising a fluoride. The membrane comprises water, such as by being swelled in water vapour. A process for producing the membranes, and the use of such membranes for separation of carbon dioxide (CO₂) from gas mixtures are disclosed.